~~S E C R E T~~

CIA INTERNAL USE ONLY

INTELLIGENCE MEMORANDUM

QUARTERLY ESTIMATE OF THE PRODUCTION OF AIRCRAFT IN THE SINO-SOVIET BLOC OCTOBER-DECEMBER 1955

CIA/RR IM-421

10 February 1956

WARNING

THIS MATERIAL CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE LAWS, TITLE 18, USC, SECS. 793 AND 794, THE TRANSMISSION OR REVELATION OF WHICH IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

CIA INTERNAL USE ONLY

~~S E C R E T~~

FOREWORD

This publication is the third in a series to be issued on a quarterly basis summarizing production of aircraft in the Sino-Soviet Bloc. The estimates presented are intended to supersede those contained in previous CIA reports and are published to satisfy consumer requests for the most recent estimates of aircraft production in the Bloc. A new methodology has been employed to a limited extent in preparing the present estimates. The basis for the new methodology -- the production experience of the US aircraft industry since World War II -- contrasts with earlier methodologies utilizing the experiences of World War II as a basis for estimating aircraft production. Changes in the present estimates from past estimates have resulted both from the methodological innovation and from later information. No interagency coordination has been attempted, and no dissemination of this memorandum outside of CIA is planned.

CONTENTS

Page

1. Trends in Production 1
2. Soviet Production 2
3. Satellite Production 3

Tables

1. Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number, 1953 through 1955 4

2. Estimated Production of Aircraft in the Sino-Soviet Bloc, by Weight, 1953 through 1955 5

3. Estimated Cumulative Production of Selected Soviet Military Aircraft, through 1955 6

4. Estimated Production of Aircraft in the USSR, by Number, 1953 through 1955 7

5. Estimated Production of Aircraft in the USSR, by Weight, 1953 through 1955 8

6. US Military Aircraft Acceptances, by Number, 1953 through 1955 9

7. US Military Aircraft Acceptances, by Weight, 1953 through 1955 10

8. Estimated Production of Aircraft in the European Satellites, by Number, 1953 through 1955 11

9. Estimated Production of Aircraft in the European Satellites, by Weight, 1953 through 1955 12

Charts

		Following Page
Figure 1.	US and USSR: Production of Military Aircraft, by Number, 1953 through 1955	12
Figure 2.	US and USSR: Production of Military Aircraft, by Weight, 1953 through 1955	12

CIA/RR IM-421
(ORR Project 33.1001)

S-E-C-R-E-T

QUARTERLY ESTIMATE OF THE PRODUCTION OF AIRCRAFT IN THE SINO-SOVIET BLOC OCTOBER-DECEMBER 1955*

1. Trends in Production.

In the fourth quarter of 1955, estimated production of aircraft by the Sino-Soviet Bloc was almost the same as in the previous quarter.** Approximately 50 percent of the aircraft produced during the fourth quarter are believed to have been combat types.*** Production of aircraft during 1955 is estimated to have declined by about 15 percent from production in 1954. The decline was principally in the production of fighter aircraft in the USSR, where production of the Fresco (MIG-17) is being replaced by production of later models.**** A second important reason for decline was a reduction in production of the Beagle (IL-28) caused by phasing 1 of the 4 Beagle production plants out of the program.

In contrast to the reduction in numbers of aircraft produced from 1954 to 1955, production of aircraft in terms of airframe weight increased slightly. This increase resulted from the trend toward greater weight in modern aircraft.

---

* The estimates and conclusions contained in this memorandum represent the best judgment of ORR as of 1 January 1956.

** Estimated production of aircraft in the Sino-Soviet Bloc from 1953 through 1955, by number, is given in Table 1, p. 4, below, and by airframe weight, in Table 2, p. 5, below.

*** For the purposes of this memorandum, combat types include bomber, fighter, and ground attack aircraft. Other aircraft such as helicopters and transports have uses under both combat and noncombat conditions.

**** Estimated cumulative production of selected Soviet military aircraft through 1955 is given in Table 3, p. 6, below.

2. Soviet Production.

The USSR continues to produce most of the aircraft manufactured in the Sino-Soviet Bloc.* Of the 2,187 aircraft estimated to have been produced in the fourth quarter of 1955, 1,913 aircraft, or about 87 percent, were produced in the USSR. On the basis of airframe weight, almost 95 percent of the total estimated production of aircraft in the Bloc took place in the USSR. The difference between the Soviet share of production on a weight basis as opposed to a unit basis is explained by the production of relatively lighter aircraft by the European Satellites. The Soviet share of total Bloc production of aircraft in 1955 in terms of both units and pounds was not significantly different from its share during the fourth quarter of 1955. About 90 percent of all Bloc production of combat aircraft is believed to have taken place in the USSR during 1955.

Recent intelligence information has resulted in three major changes in the previously published estimates of Soviet production of aircraft. The first of these changes is a reduction in the estimated production of the Bison because there have not been enough sightings of the Bison at the producing plant to support previous estimates. The present reduced estimates for production of the Bison are tentative because all Bison sightings to date may well be associated with developmental work on the aircraft rather than series production. A second change results from a sighting of possible Flashlights in the assembly area of a plant formerly listed as producing the Beagle. If Flashlights are in production at this plant, the total estimated production of the Beagle must be reduced. Finally, previous assumptions that the Flashlight was being produced at Saratov have had to be changed because of evidence of production of other new fighter aircraft at this facility. Intelligence information on the possible series production of the Bear turboprop heavy bomber has been scanty and unconvincing, although at least seven of these aircraft are known to have been built.

During 1955, production of purely military aircraft (bombers and fighters) in the US exceeded estimated production in the USSR by

* Production of aircraft in the USSR from 1953 through 1955, by number, is given in Table 4, p. 7, below, and by airframe weight, in Table 5, p. 8, below.

about 10 percent. The trend toward greater production of military types in the US during the first 3 quarters of 1955, however, was reversed during the fourth quarter of 1955, when the USSR produced about 10 percent more military aircraft than the US.*

3. Satellite Production.

In the fourth quarter of 1955 the European Satellites produced an estimated total of 274 aircraft, or about 13 percent of the total production of aircraft in the Sino-Soviet Bloc.** There is still no indication that Communist China or the Asiatic Satellites are producing aircraft. Czechoslovakia is still the largest producer among the Satellites, accounting for an estimated 70 percent of the total Satellite production of aircraft, by number, during 1955. Because Poland's share of the total Satellite production in 1955 was roughly 25 percent, Czechoslovakia and Poland together are estimated to have accounted for virtually all of the Satellite production of aircraft in 1955.

Production of Fagot (MIG-15) jet fighters in Czechoslovakia is estimated to have declined from 23 to about 10 aircraft per month during the fourth quarter of 1955. It is believed that this decline is associated with the beginning of production of the Fresco at the Vodochody plant.

* Production of military aircraft in the USSR and the US from 1953 through 1955 is compared, by number, in Figure 1, following p. 12, and by airframe weight, in Figure 2, following p. 12. For additional comparison, US military aircraft acceptances from 1953 through 1955, by number, are given in Table 6, p. 9, below, and by airframe weight, in Table 7, p. 10, below.

** Estimated production of aircraft in the European Satellites from 1953 through 1955, by number, is given in Table 8, p. 11, below, and by airframe weight, in Table 9, p. 12, below.

Table 1

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number
1953 through 1955

Units

Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Jet bomber							
Heavy	0	10	61	9	13	17	22
Medium	10	170	306	66	73	81	86
Light	1,404	1,280	991	271	250	239	231
Piston bomber							
Medium	134	0	0	0	0	0	0
Jet fighter	4,040	4,173	3,446	938	861	849	798
Ground attack	457	207	60	30	30	0	0
Transport	1,722	1,741	1,067	254	264	272	277
Trainer							
Jet	522	1,157	1,344	336	336	336	336
Piston	877	1,077	1,158	284	291	291	292
Others a/	728	626	530	132	121	132	145
Total	9,894	10,441	8,963	2,320	2,239	2,217	2,187

a. Helicopters, gliders, seaplanes, and utility aircraft.

Table 2

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Weight
1953 through 1955

Thousand Pounds of Airframe Weight [a]

Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Jet bomber							
Heavy	0	1,118	6,818	1,006	1,453	1,900	2,459
Medium	508	8,629	15,534	3,351	3,706	4,112	4,365
Light	25,601	23,280	18,022	4,928	4,547	4,346	4,201
Piston bomber							
Medium	6,963	0	0	0	0	0	0
Jet fighter	28,516	29,228	26,671	6,688	6,500	6,704	6,779
Ground attack	3,700	1,676	486	243	243	0	0
Transport	9,046	9,638	8,358	1,845	2,037	2,190	2,286
Trainer							
Jet	3,214	8,663	9,860	2,465	2,465	2,465	2,465
Piston	907	1,353	1,756	424	444	443	445
Others [b]	6,797	6,713	6,006	1,481	1,396	1,513	1,616
Total	85,252	90,298	93,511	22,431	22,791	23,673	24,616

a. These figures include production of spare parts.
b. Helicopters, gliders, seaplanes, and utility aircraft.

Table 3

Estimated Cumulative Production
of Selected Soviet Military Aircraft
through 1955

Units

Model	Type of Aircraft	Estimated Cumulative Production
Badger	Jet medium bomber	486
Beagle	Jet light bomber	6,008
Bison	Jet heavy bomber	71
Farmer	Jet fighter	183
Flashlight	Jet all-weather interceptor	212
Fresco	Jet fighter	8,766
Horse	Helicopter	16
Hound	Helicopter	532
New fighter	Probable jet fighter	61

Table 4

Estimated Production of Aircraft in the USSR, by Number
1953 through 1955

Units

Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Jet bomber							
Heavy	0	10	61	9	13	17	22
Medium	10	170	306	66	73	81	86
Light	1,404	1,280	991	271	250	239	231
Piston bomber							
Medium	134	0	0	0	0	0	0
Jet fighter	3,742	3,633	2,899	795	713	701	690
Transport	1,722	1,741	1,067	254	264	272	277
Trainer							
Jet	522	1,068	1,068	267	267	267	267
Piston	684	828	828	207	207	207	207
Others a/	683	602	493	125	113	122	133
Total	8,901	9,332	7,713	1,994	1,900	1,906	1,913

a. Helicopters, gliders, and seaplanes.

Table 5

Estimated Production of Aircraft in the USSR, by Weight
1953 through 1955

Thousand Pounds of Airframe Weight a/

Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Jet bomber							
Heavy	0	1,118	6,818	1,006	1,453	1,900	2,459
Medium	508	8,629	15,534	3,351	3,706	4,112	4,365
Light	25,601	23,280	18,022	4,928	4,547	4,346	4,201
Piston bomber							
Medium	6,963	0	0	0	0	0	0
Jet fighter	26,719	25,790	23,371	5,825	5,607	5,811	6,128
Transport	9,046	9,638	8,358	1,845	2,037	2,190	2,286
Trainer							
Jet	3,214	8,092	8,092	2,023	2,023	2,023	2,023
Piston	698	919	992	248	248	248	248
Others b/	6,742	6,696	5,958	1,475	1,389	1,503	1,601
Total	79,491	84,342	87,155	20,701	21,010	22,133	23,311

a. These figures include production of spare parts.
b. Helicopters, gliders, and seaplanes.

Table 6

US Military Aircraft Acceptances, by Number
1953 through 1955

Units

Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Bomber							
Heavy	63	28	34	5	6	10	13
Medium	647	767	530	161	146	117	106
Light	464	966	786	211	234	182	159
Fighter	4,665	3,518	4,017	1,064	1,249	959	745
Transport	784	634	536	153	121	131	131
Trainer	1,961	1,602	1,439	345	362	378	354
Others a/	2,046	1,235	703	153	162	159	229
Total	10,630	8,750	8,045	2,092	2,280	1,936	1,737

a. Helicopters, flying boats, amphibians, and lighter-than-air.

Table 7

US Military Aircraft Acceptances, by Weight
1953 through 1955

Thousand Pounds of Airframe Weight [a]

Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Bomber							
Heavy	7,123	3,304	3,853	572	686	1,129	1,466
Medium	30,034	37,296	26,376	8,019	7,373	5,834	5,150
Light	4,621	9,627	8,758	2,292	2,466	2,155	1,845
Fighter	40,682	35,390	43,160	11,072	13,151	10,374	8,563
Transport	36,550	30,614	20,697	6,426	4,551	4,771	4,949
Trainer	11,302	9,633	7,452	2,218	2,003	1,816	1,415
Others [b]	7,819	4,831	4,399	956	1,305	1,000	1,138
Total	138,131	130,695	114,695	31,555	31,535	27,079	24,526

a. These figures do not include the production of spare parts.
b. Helicopters, flying boats, amphibians, and lighter-than-air.

Table 8

Estimated Production of Aircraft in the European Satellites, by Number
1953 through 1955

Units

Country	Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Czechoslovakia	Jet fighter	294	394	236	69	69	69	29
	Ground attack	457	207	60	30	30	0	0
	Jet trainer	0	89	276	69	69	69	69
	Piston trainer	66	165	306	71	78	78	79
	Small transport	25	0	13	1	2	4	6
Total		842	855	891	240	248	220	183
Poland	Jet fighter	4	146	311	74	79	79	79
	Piston trainer	0	60	0	0	0	0	0
Total		4	206	311	74	79	79	79
Bulgaria	Piston trainer	103	0	0	0	0	0	0
Rumania	Piston trainer	24	24	24	6	6	6	6
Hungary	Utility	20	24	24	6	6	6	6
Grand total		993	1,109	1,250	326	339	311	274

Approved For Release 1999/09/21 : CIA-RDP79T00935A000300280001-1

Table 9

Estimated Production of Aircraft in the European Satellites, by Weight
1953 through 1955

Thousand Pounds of Airframe Weight a/

Country	Type of Aircraft	1953	1954	1955	1955 1st Quarter	1955 2d Quarter	1955 3d Quarter	1955 4th Quarter
Czechoslovakia	Jet fighter	1,775	2,380	1,426	417	417	417	175
	Ground attack	3,700	1,676	486	243	243	0	0
	Jet trainer	0	571	1,768	442	442	442	442
	Piston trainer	72	349	742	171	190	190	191
	Small transport	41	0	21	2	3	6	10
Total		5,588	4,976	4,443	1,275	1,295	1,055	818
Poland	Jet fighter	22	878	1,874	446	476	476	476
	Piston trainer	0	64	0	0	0	0	0
Total		22	942	1,874	446	476	476	476
Bulgaria	Piston trainer	116	0	0	0	0	0	0
Rumania	Piston trainer	21	21	22	5	6	5	6
Hungary	Utility	14	17	17	4	4	4	5
Grand total		5,761	5,956	6,356	1,730	1,781	1,540	1,305

a. These figures include production of spare parts.

Approved For Release 1999/09/21 : CIA-RDP79T00935A000300280001-1

Approved For Release 1999/09/21 : CIA-RDP79T00935A000300280001-1

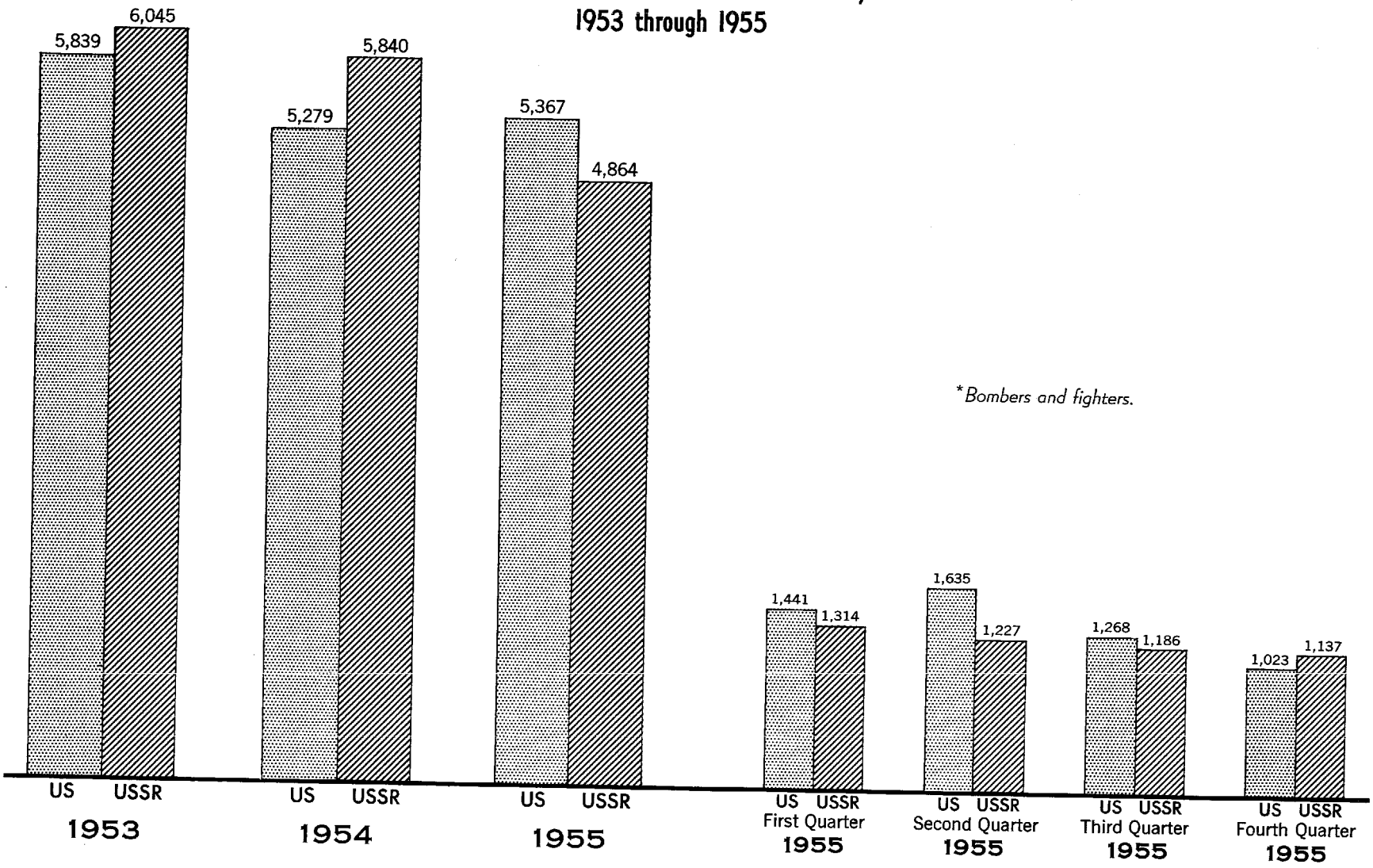
SECRET

US and USSR

FIGURE 1

PRODUCTION OF MILITARY AIRCRAFT,* BY NUMBER

1953 through 1955



*Bombers and fighters.

25295 2-56

SECRET

SECRET

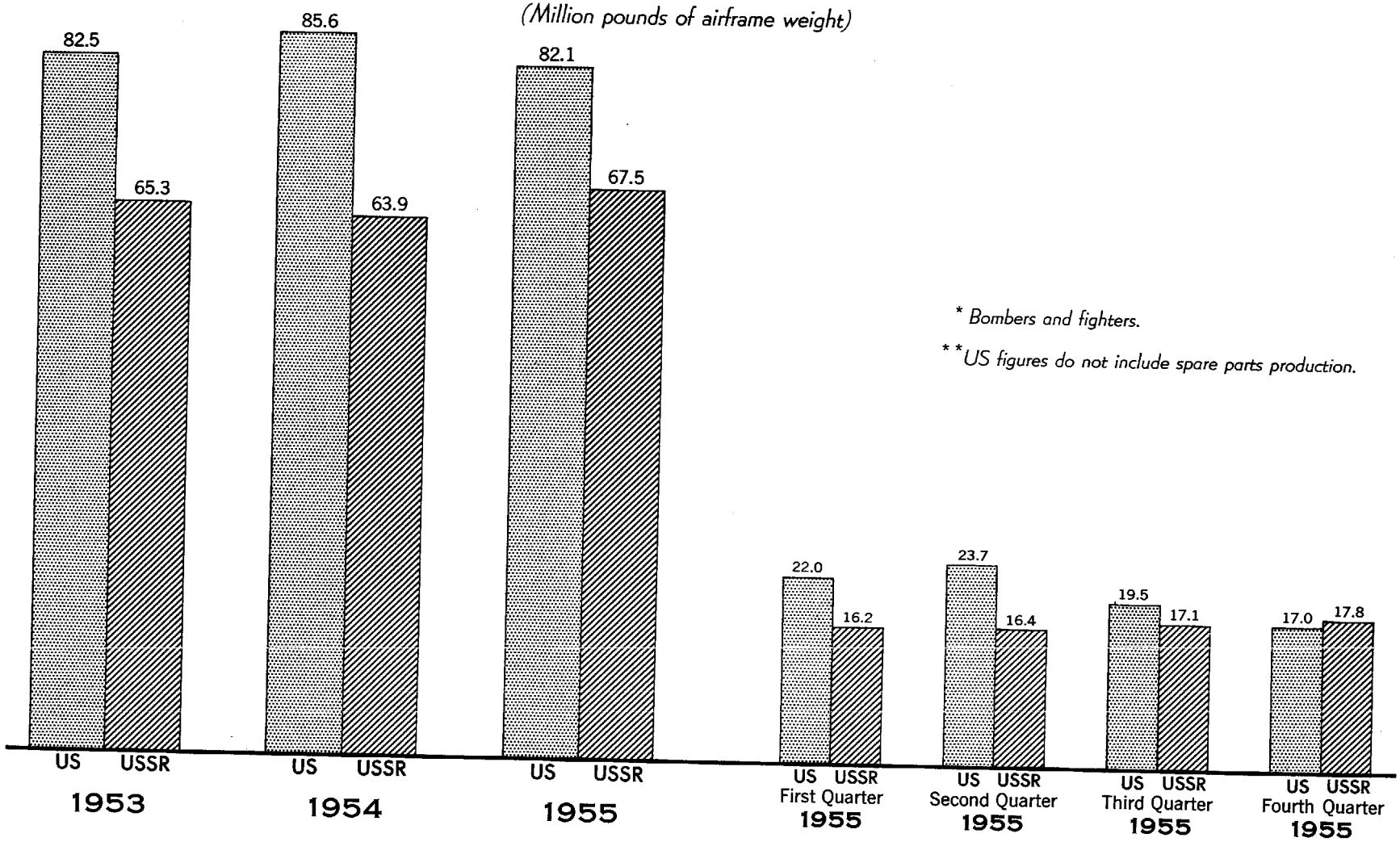
US and USSR

FIGURE 2

PRODUCTION OF MILITARY AIRCRAFT,* BY WEIGHT**

1953 through 1955

(Million pounds of airframe weight)



* *Bombers and fighters.*

** *US figures do not include spare parts production.*

25294 2-56

SECRET

Approved For Release 1999/09/21 : CIA-RDP79T00935A000300280001-1

S-E-C-R-E-T

CIA INTERNAL USE ONLY

CIA INTERNAL USE ONLY

S-E-C-R-E-T

Approved For Release 1999/09/21 : CIA-RDP79T00935A000300280001-1